

AGRICULTURAL
ECONOMICS
RESEARCH UNIT



Lincoln College

A REVIEW OF THE ARGENTINE

BEEF CATTLE SITUATION

BY

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A REVIEW OF THE ARGENTINE

BEEF CATTLE SITUATION

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THE AGRICULTURAL ECONOMICS RESEARCH UNIT

THE Unit was established in 1962 at Lincoln College with an annual grant from the Department of Scientific and Industrial Research. This general grant has been supplemented by grants from the Wool Research Organisation, the Nuffield Foundation and the New Zealand Forest Service for specific research projects.

The Unit has on hand a long-term programme of research in the fields of agricultural marketing and agricultural production, resource economics, and the relationship between agriculture and the general economy. The results of these research studies will be published as Unit reports from time to time as projects are completed. In addition, it is intended to produce other bulletins which may range from discussion papers outlining proposed studies to reprints of papers published or delivered elsewhere. All publications will be available to the public on request.

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P R E F A C E

There have been many suggestions, in the last year or so, that New Zealand should encourage a rapid increase in beef production because of the high prices prevailing for beef in world meat markets. High prices for beef result mainly from the shortfall in exports from Argentina and it is important that the relative permanence of these prices be assessed. Are high beef prices simply due to a temporary cycle in Argentine production or has beef become a permanently expensive meat?

This publication reviews beef production, consumption and export trends in Argentina and attempts to give a provisional answer to the above question.

Our answer is only provisional because the situation in Argentina is extremely complex and is changing so rapidly that its study really demands the continuing attention of a specialist - at present beyond the resources of the Research Unit.

Instead the present publication is the result of work done by Mr R.J. Townsley, before leaving for overseas study in early 1965, and then, after a lapse of a year, taken up again and completed by Mr R.W.M. Johnson.

B. P. Philpott

Lincoln College,
March 1966

ration internal supplies. Recent export trends are reviewed first, then stocks and slaughterings, marketings, consumption, fluctuations, policy, and finally, future trends in production and exports.

1. Argentine Share of World Production and Exports

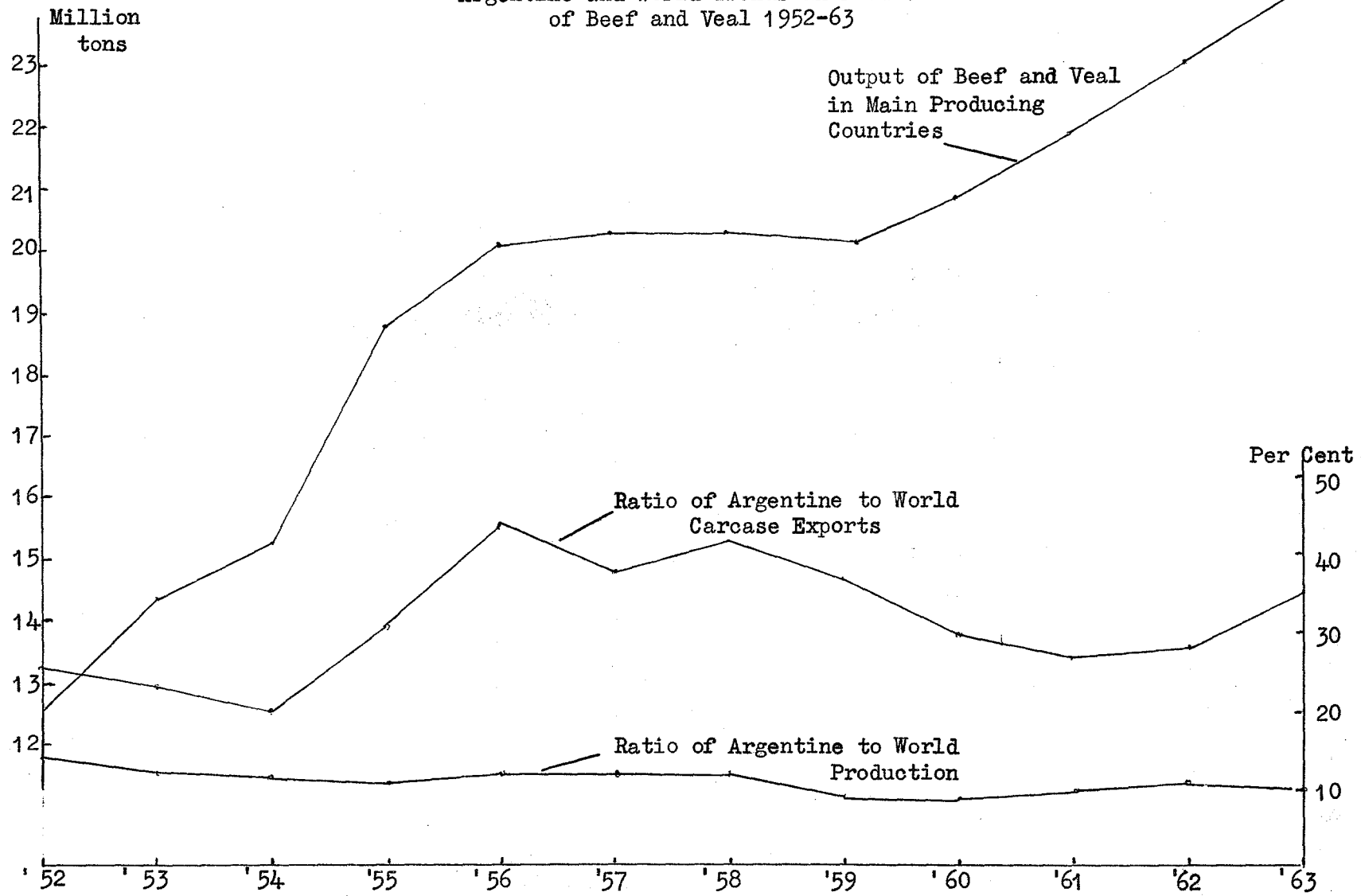
According to the Commonwealth Economic Committee, output of beef and veal in the 27 main producing countries of the world increased from approximately 12.6 million tons in 1952 to approximately 24.1 million tons in 1963, a compound rate of increase of just over 6% per year.¹ However, from Figure 1 it is evident that most of the expansion over this period had taken place by the end of 1956. Argentine production of beef and veal increased irregularly from approximately 1.8 million tons to 2.4 million tons over the same period, a compound rate of increase of approximately 2 per cent per year. In 1952, Argentina's share of world production was about 14 per cent; by 1963 this had fallen to around 10 per cent.

World exports of carcase beef and veal for 20 countries totalled approximately 760 thousand tons in 1938. The 1952/53 average was approximately 440 thousand tons, but the 1962/63 average had risen to approximately 1,440 thousand tons; a compound rate of increase over the years 1952/53 to

¹ Meat, A Review, H.M.S.O. 1965; and earlier editions.

FIGURE 1

Argentina and World Trends in Production
of Beef and Veal 1952-63



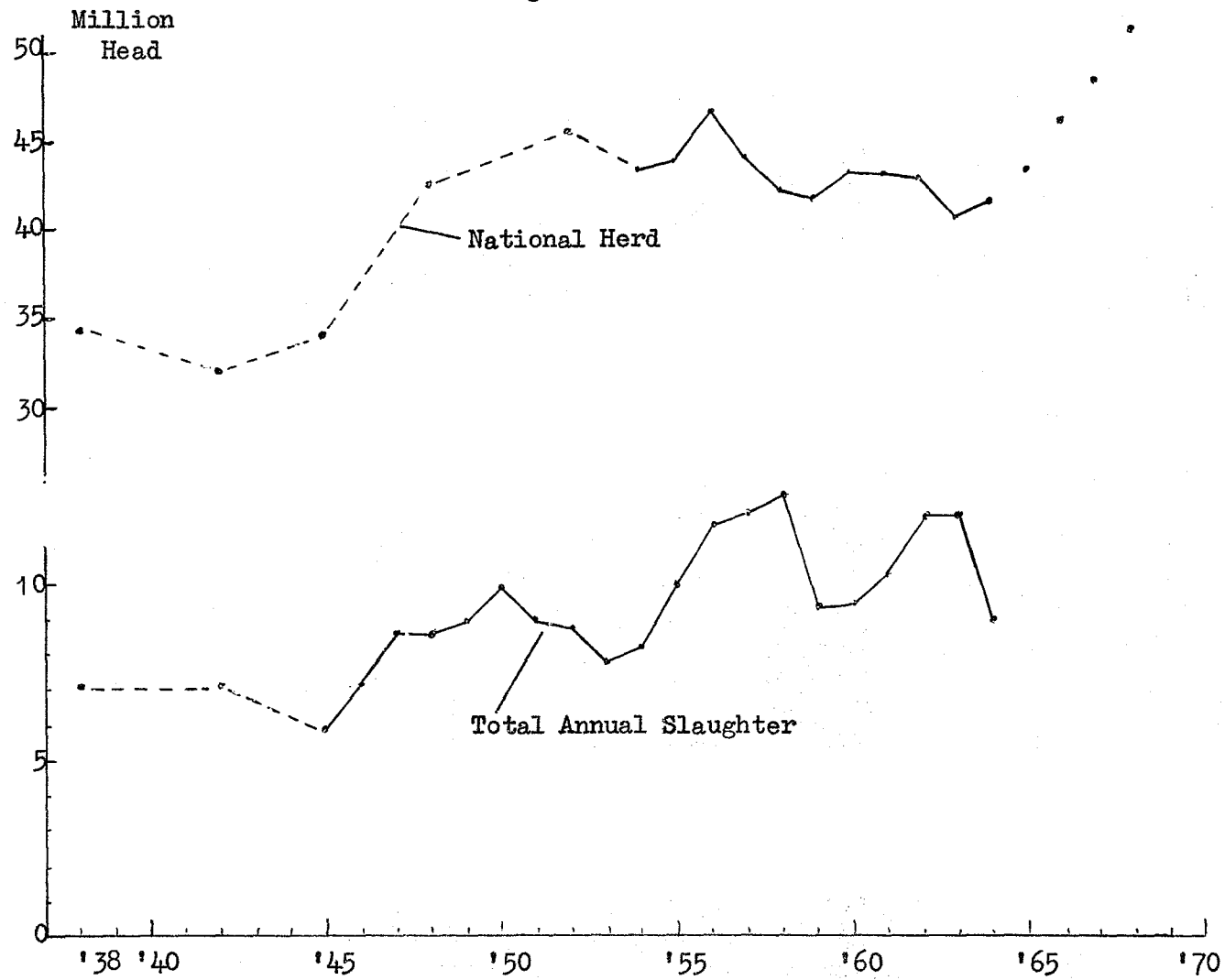
1962/63 of approximately 11 per cent per year. As a percentage of world beef production, world exports of carcass beef and veal have risen from just over 3 per cent in 1952/53 to just over 6 per cent in 1963 (approximately 7 per cent in 1938). Argentine exports of carcass beef and veal totalled approximately 440 thousand tons in 1938. Over the period 1952 to 1964 they increased from just over 100 thousand tons to approximately 385 thousand tons, reaching a peak of 528 thousand tons in 1963. Argentina's share of world carcass beef and veal exports was just under 60 per cent in 1938, just over 20 per cent in the period 1952-1954, rose to just over 40 per cent in 1958, had fallen to just under 30 per cent in 1962, and risen to 35 per cent in 1963 at the peak of the latest production cycle.

2. Cattle Stocks and Slaughter

Available data on the size of the national herd and estimates of total annual slaughter of beef animals are set out in Figure 2. There was apparently some decline in the size of the national herd during the war years, but in the post-war period up to 1956, the herd rose from under 35 million to nearly 47 million head, a growth rate of approximately $2\frac{1}{2}$ per cent per annum. Since 1956, the national herd has varied between 40 and 43 million, without showing any further tendency to rise above these levels.

FIGURE 2

National Herd of Argentine and
Annual Slaughter Offtake 1938-1964



The Figure also shows a 6 year projection of the national herd made by the Review of the River Plate in 1964 and discussed in Section 9.

The total number of animals slaughtered in 1938 was 7,069 thousand head, about 20.6 per cent of the national herd at that time. Slaughter fell to 5,975 thousand head in 1945, and then in the post-war period steadily built up to a peak of 9,898 thousand head in 1950, another peak of 12,278 thousand head in 1958, and another of 11,800 thousand head in both 1962 and 1963. Slaughter fell back in the period 1953-1954, 1959-1960 and during 1964 and 1965.

According to the Review of the River Plate, the peak slaughterings in 1957-1958 and 1962-1963 were at the expense of the national herd.¹ For the period 1954-1963, they estimate that slaughterings averaged 24.9 per cent of the total number of stock, and that in the above years the national herd was diminished by excessive slaughtering. For the five years for which data is available before 1954, the average level of slaughter was only 20.1 per cent of the national herd. Since these years are isolated examples, too much should not be read into this figure, but it is fairly clear that the national herd was increasing in the

¹ Review of the River Plate, Buenos Aires, July 10, 1964, and October 31, 1964. Some important reservations are noted in the latter issue on the accuracy of the national data.

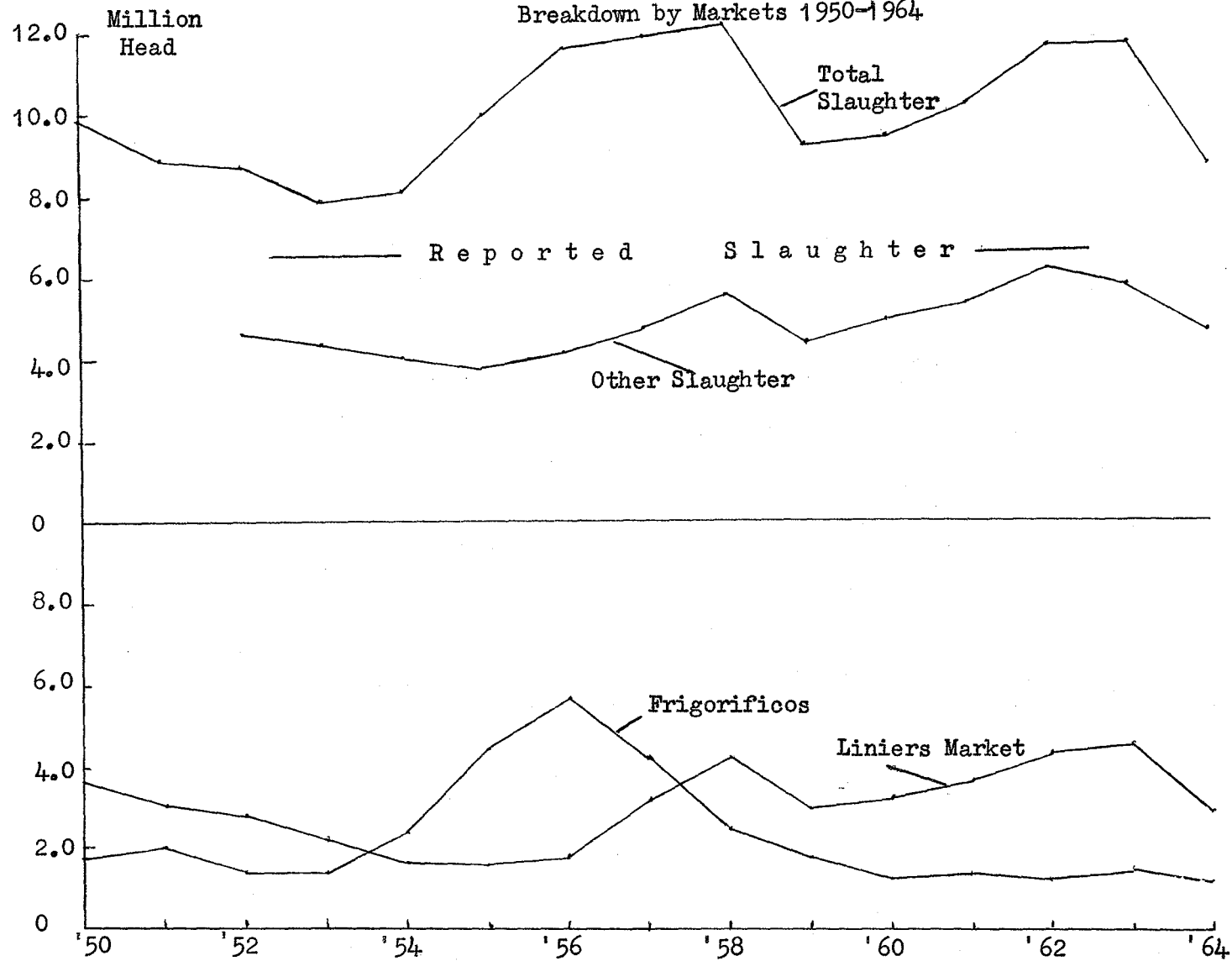
post-war years, and slaughter levels were low as a result. According to export figures for 1965, slaughter levels are well below those of 1964, so that the upward trend in stock numbers evident for 1964 in Figure 2, may continue in 1965. Further evidence on future trends in stock numbers and slaughter will be considered in a later section.

3. Cattle Marketings

Most final sales of livestock are by auction at the terminal markets or the many local weekly livestock auctions. Large numbers of animals are also bought directly on farms by the large packing house organisations (frigorificos).

About 40 per cent of all cattle are sold in the four terminal markets and the largest of these - the Liniers market in Buenos Aires - handles about 35 per cent of all cattle sales. A further 20 per cent of all cattle sales are made direct on ranches to frigorificos. The remaining 40 per cent of sales are made through the many local auctions found in almost every town, or by private sales. These cattle are bought by butchers for slaughter in one of the local municipal abattoirs. Sales direct from ranches to frigorificos and sales made through Liniers are reported from 1952 onwards. These are compared with estimates of total slaughter for the same period in Figure 3. The share of total slaughter through Liniers and the frigorificos rose considerably in the period from 1955 to 1958, reaching a

FIGURE 3
Total Slaughter, Reported Slaughter and
Breakdown by Markets 1950-1964



maximum of 65 per cent of total slaughter in 1956. In the 1962-63 production expansion, however, a smaller proportion passed through these two buying agencies. This change in the structure of the market is associated with the rising internal demand for beef which is discussed below. In the downswing of the production cycle the local markets tend to attract more sales as might be expected.

The lower portion of Figure 3 shows the breakdown of reported marketings between Liniers and the frigorificos. The 1956 export expansion was largely taken up by direct buying by the frigorificos from ranches, but of recent years, ranchers have shown a marked preference for the auction system at Liniers market, where local demand is clearly expressed. This has forced the frigorificos to buy their requirements on the Liniers market as well.

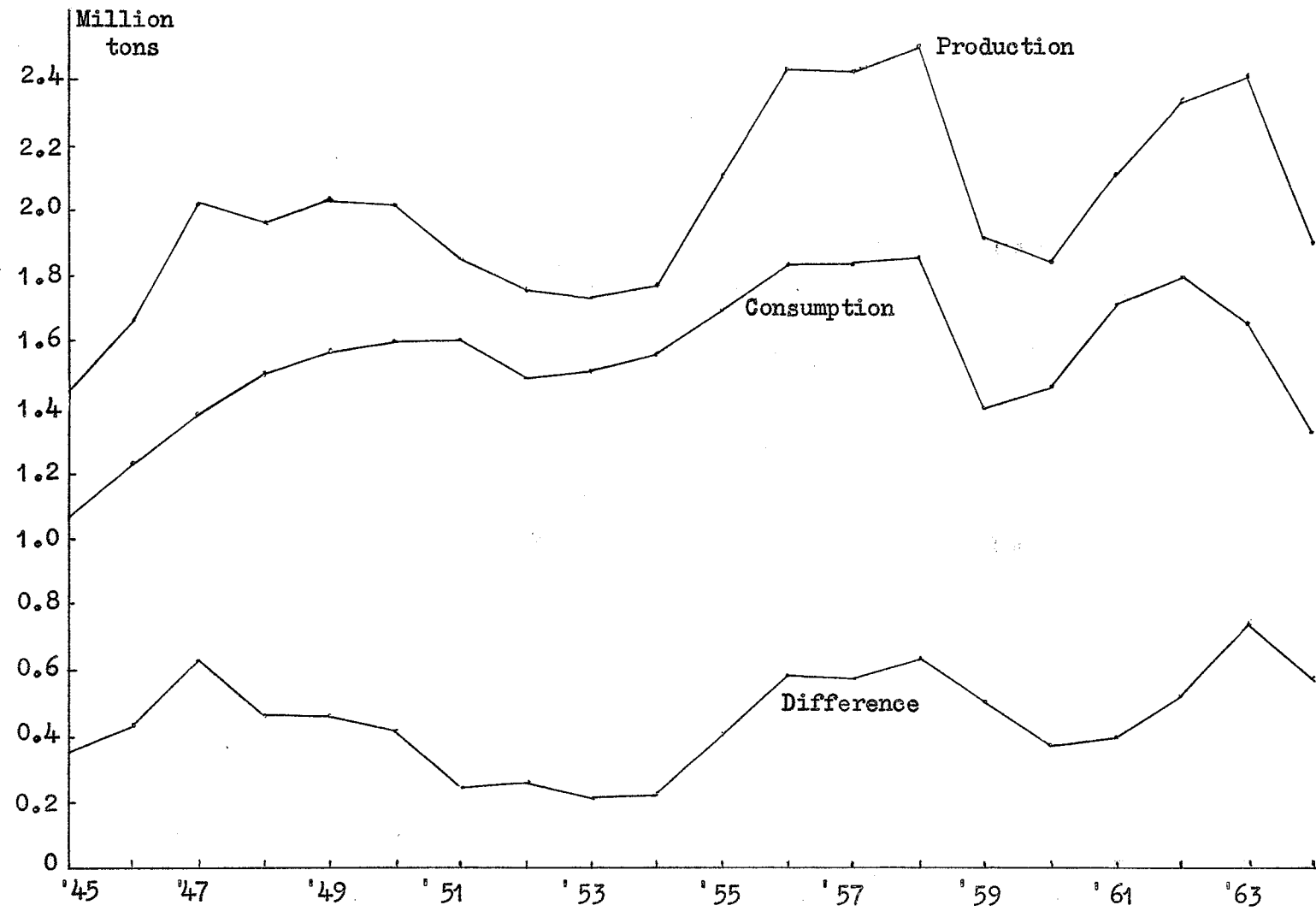
4. Local Production and Consumption

Figure 4 sets out the trends since the war, in production, domestic consumption and exports of beef and veal from the Argentine. Total production includes local slaughter and live exports of animals on the hoof. Exports given here are the difference between production and consumption and are graphed separately at the foot of the Figure as well.

In 1938, domestic consumption accounted for 65 per cent of total production, but since the war consumption

FIGURE 4

Production, Consumption and Exports, 1945-1964



has varied from 69 per cent to 87 per cent of production, according to the stage of the production cycle. In the early fifties, consumption was apparently allowed to absorb a greater share of the available supplies when these were short, but in 1959-60, and again in 1963-64 local consumption has been cut back considerably. In the last period this has been associated with rigid controls on supplies and the imposition of "beefless" days in the week. Without doubt, the earlier export booms were more of a true surplus to local requirements, while in the sixties, exports have only been maintained by internal rationing measures.

Figure 4 shows more clearly than the slaughter data in Figure 2, the three definite production cycles which have occurred in the Argentine since the war. There is a seven year period between troughs in the cycle, but the peaks seem to vary from a five year period from 1958 to 1963 up to a nine year period between 1947 and 1956. Latest export figures for 1965 show that slaughterings are lower than in 1964, but whether production will reach the trough in 1965 which the graph indicates, or in 1966, which is the 7 year trough in the cycle, is a bit uncertain. Indications are that the last cycle has been a shorter one, hence 1965 may be the true trough this time. Further evidence on this is available from the sex and age composition of reported slaughtered animals which is discussed overleaf.

5. Fluctuations in Annual Slaughtering

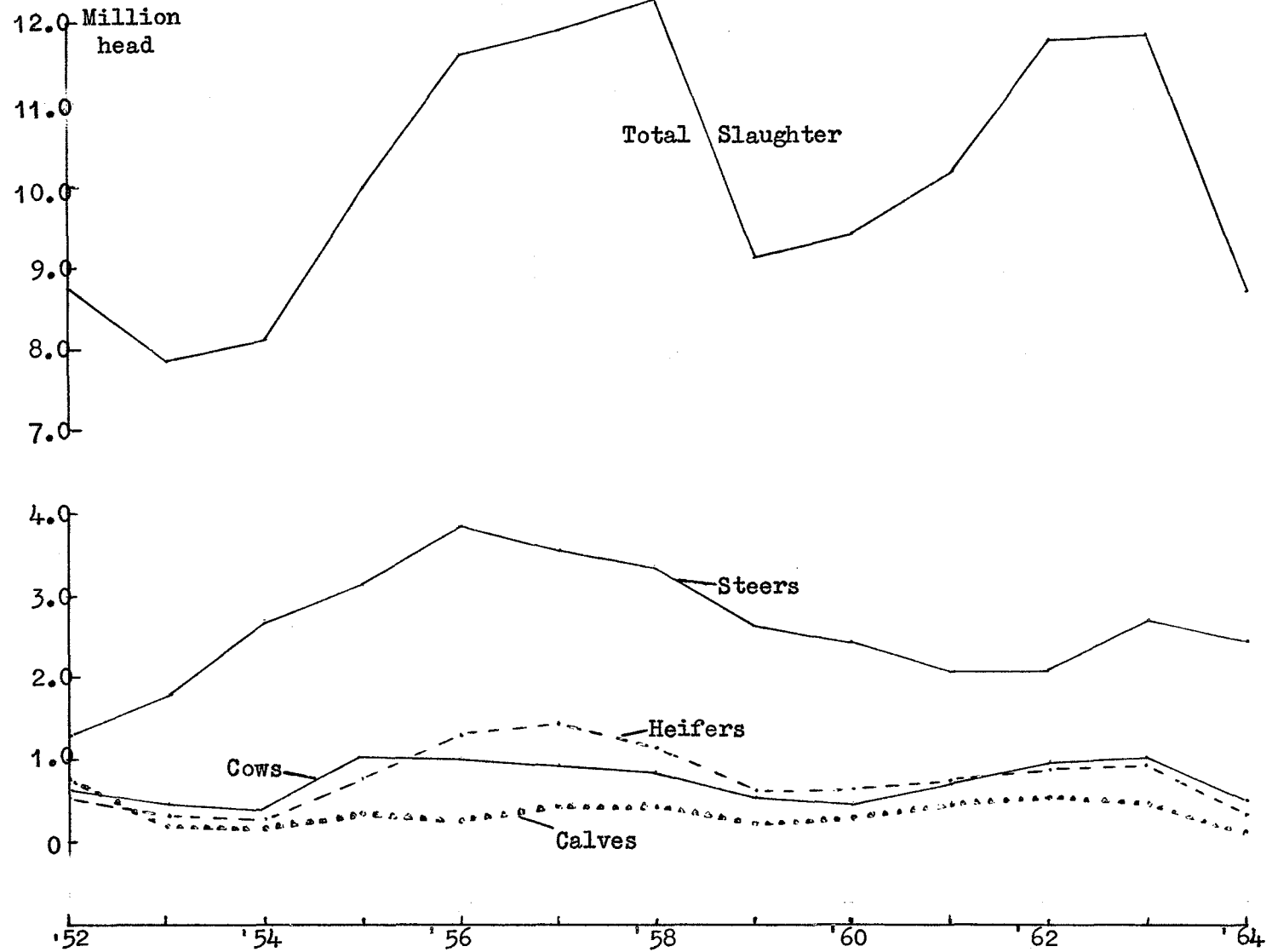
The age and sex composition of slaughtered stock is available from reported sales at the Liniers markets and from direct purchases off ranches by the packing houses, since 1953. As Figure 3 shows, reported sales are a declining proportion of total slaughterings, hence a different age and sex structure among non-reported sales may conceal some of the real trends in slaughter patterns. Figure 5a shows annual reported slaughterings of steers, bullocks, cows, heifers and calves, compared with total slaughterings.

During the rise in the production cycle in 1955 and 1956, reported marketings rose to 65 per cent of total slaughter. There was a steady increase in steers marketed from 1952 right through to 1956, but disinvestment in cows, heifers and calves did not start until 1955, while the running down of heifer stocks continued through to 1957. It is thus clear that the continued increase of total slaughterings into 1958, must have come from markets, other than Liniers, and from private slaughtering. The only evidence for this period of the production cycle being sustained by a running down of stocks appears in the national estimate of herd size which fell from 43,980 thousand in 1957, to 41,327 thousand in 1958 and 41,167 thousand in 1959.

The increase in total slaughter in 1961 and 1962 was not so evident in reported marketings, although cows, heifers and calves showed small upward trends from 1960 to 1963.

FIGURE 5a

Reported Slaughtering of Steers, Cows, Heifers and Calves 1952-1964



However, in 1964 reported slaughterings of all classes of stock are markedly down, and while steers recovered somewhat in the first 6 months of 1965, heifers and cows were coming forward at around the 1964 levels, so that the build-up of breeding stock was continuing on the latest information. Thus, allowing a breeding period of 2-3 years, substantial increases in steer marketings could be expected in 1966 and 1967.

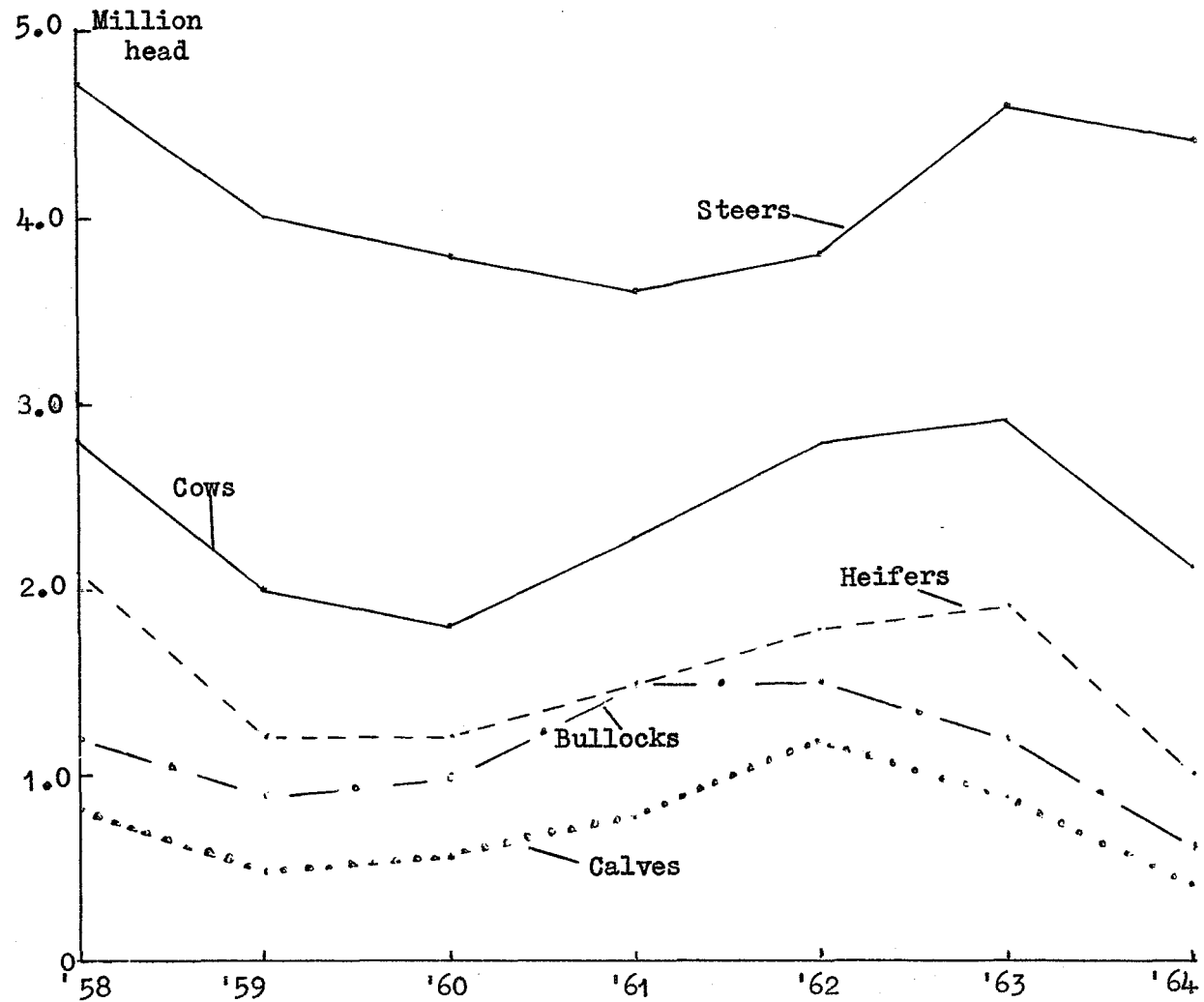
The age and sex composition of total national slaughterings since 1957 are shown in Figure 5b. These are estimates recently put out by the National Meat Board.¹ The greater slaughter of cows and heifers in 1962-63 is more clearly brought out. It should also be noted that, on a national basis, cows and heifers form a greater proportion of slaughtered stock.

In the long run it will be of crucial importance whether the cyclic conditions of the whole post-war period will be reproduced again in 1968 and 1969, or whether the growth of the national herd becomes accepted as being of greater importance than short-term increases of consumption and exports. It appears from Figure 2 that a slightly higher proportion of the national herd is being slaughtered at present, compared with the war period, but this possible increase in efficiency may reflect lighter carcass weights, and the yield in tonnage of meat may not be changing greatly.

¹ Review of the River Plate, February 27, 1965

FIGURE 5b

Composition of Total Slaughter 1958-1964



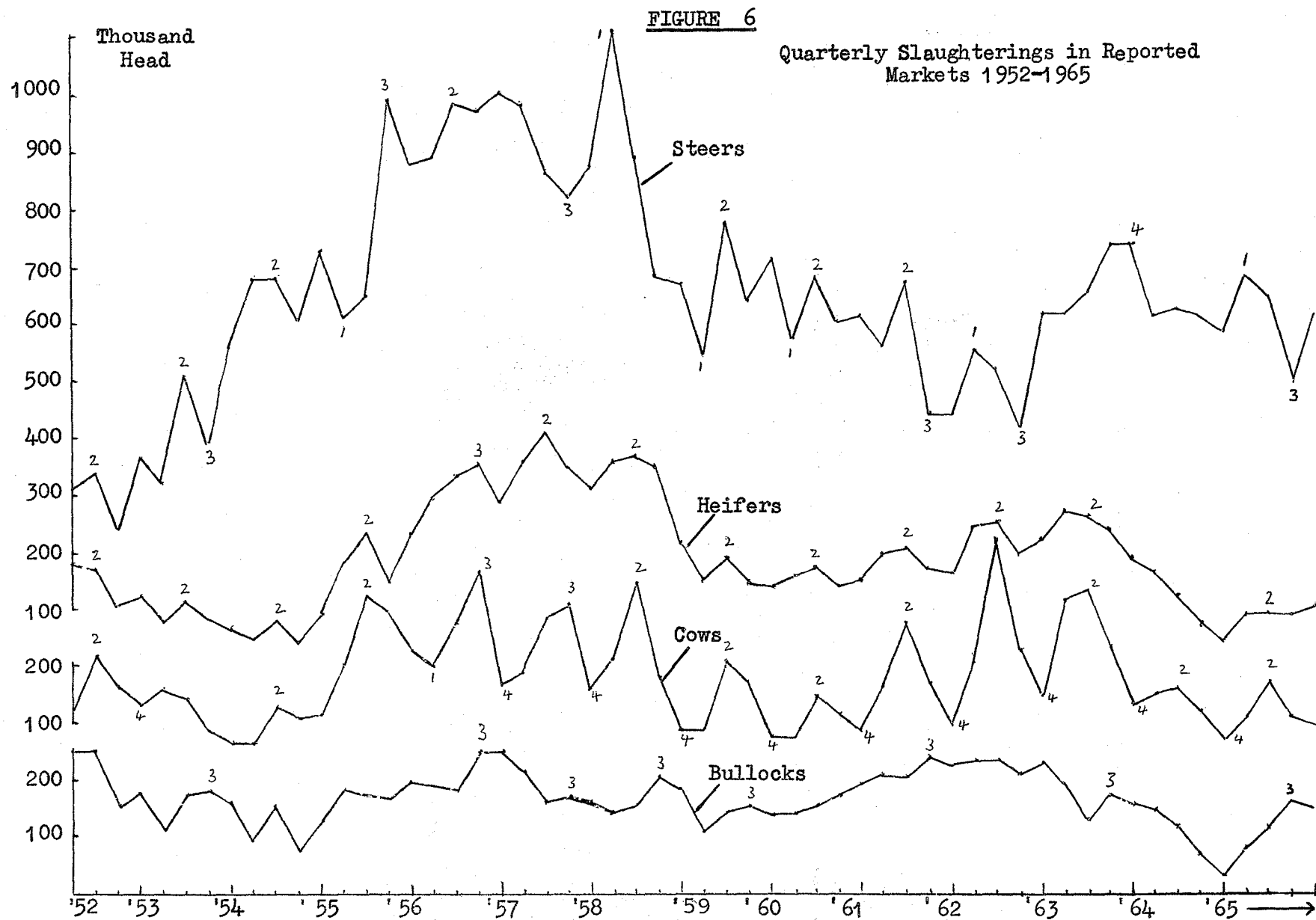
6. Fluctuations in Quarterly Slaughterings

Quarterly changes in type of stock entering reported markets are shown in Figure 6. Since the cattle are run on grassland in the southern hemisphere without supplementary feeding, the normal marketing peak should be expected in the first and second quarters. This annual cycle of slaughter is most systematic for heifers, but cows and steers also follow autumn slaughter in most years. Bullocks tend to come forward in the third quarter, which suggests that the local meaning of the word is associated with a steer finished in the feed-lot.

The higher levels of sales of heifers and cows in 1956-57 and 1962-63 have already been dealt with in Section 5. Figure 6 is most useful, however, in interpreting current trends in slaughtering, as the prominent seasonal factors must be taken into account for each class of stock separately. It is assumed throughout sections 5 and 6 that heifers and calves are bought for slaughter, and that Liniers does not act as a re-sale market or "ewe-fair".

7. Recent Trends in Exports

Part of the larger slaughterings in 1962 and 1963 was caused by the prolonged drought in those years. Along with Government measures to restrict consumption, this permitted a rapidly rising scale of exports into overseas markets. With good pastoral conditions and restocking, exports fell



rapidly from 528.3 thousand tons in 1963 to 384.8 thousand tons in 1964. The large increase in 1963 had been taken partly by the United Kingdom and by Italy, France, Belgium, Greece and Spain. In 1964, the U.K. dropped back considerably, as did Belgium and Spain, but Italy maintained its imports and France, West Germany, and the Netherlands actually increased their imports.¹

At the same time as these changes in the distribution pattern, there has been a swing away from chilled to frozen beef. Recent trends in type of exports are shown in the attached table. Until a detailed breakdown becomes available, it is not clear how these two facets of the export market are inter-related. As the figures for the first nine months of 1965 show, the relative positions of chilled and frozen exports have not altered since 1964.

According to recent figures published in the Review of the River Plate,² the U.K. remained the principal importer of chilled beef for the first six months of 1965 (72 per cent) followed by Italy (12 per cent), and Germany (5 per cent); while frozen beef was taken by Italy (22 per cent), Germany (18 per cent), Holland (13 per cent) and others.

¹ C.E.C. Intelligence Bulletin March 1965

² August 10, 1965 Quantities and Principal Destinations of Exports Jan.1 - June 30, 1965

Exports of Frozen and Chilled Beef 1959-65

- Tons -

	<u>Frozen</u>	<u>Chilled</u>
1959	126,107	216,049
1960	84,211	201,090
1961	114,738	154,147
1962	191,414	197,678
1963	264,342	262,421
1964	230,000	154,000
1964 Jan.-Sept.	187,104	123,035
1965 " "	136,616	95,955

Sources: Commonwealth Economic Committee, Intelligence Bulletin March 1965.

New Zealand Meat Producers' Board December 1965

Review of the River Plate, various.

Principal Destinations of Exports

- Thousand Tons -

	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>
United Kingdom	151.9	193.2	224.9	145.4
E.E.C.				
Italy	34.6	56.4	84.5	88.7
France	0.1	0.2	5.8	14.1
W. Germany	17.2	26.0	27.7	56.9
Netherlands	12.8	16.3	17.8	21.2
Belgium	10.7	12.7	18.0	13.5
Total	<u>75.4</u>	<u>111.6</u>	<u>153.8</u>	<u>194.4</u>
Greece	10.2	16.5	27.3	NA
Spain	-	25.0	45.7	7.6
Switzerland	6.3	9.8	4.1	NA
Czechoslovakia	4.1	8.0	6.3	NA
Chile	8.5	8.8	15.2	NA
Other	<u>14.3</u>	<u>14.3</u>	<u>51.0</u>	<u>37.4</u>
Grand Total	270.7	387.2	528.3	384.8

Source: Commonwealth Economic Committee, Intelligence Bulletin March 1965.

8. Recent Trends in Policy

At the beginning of 1963, the United Kingdom Government became anxious about wholesale beef prices at the Smithfield market. This weakening of the Smithfield market was felt to be due to the sudden expansion in Argentine beef shipments towards the end of 1962. This position continued during the first three months of 1963, when shipments of chilled beef to the United Kingdom were approximately 96,500 metric tons. This was more than 50 per cent above the previous year's (albeit low) figure for the same period (62,170 metric tons).

In May 1963, an agreement was reached by the Argentine and British Governments, limiting the beef export trade. Although the volume of shipments agreed to was on a par with the 1955-59 annual average of 203,500 tons, approximately 70 per cent of this agreed figure had already been covered by shipments for delivery in the U.K. within the first half of 1963. This left 30 per cent or some 61,000 tons (52,000 tons of chilled and 9,000 tons of frozen beef) for the last six months of 1963. The average volume of chilled beef deliveries to the U.K. for the second half of the year had been in the region of 90,000 tons.

During the third quarter of 1963 marketings of steers were at high levels, despite a weakness in prices. This situation was thought to be due in part to the fact that steers which should have been sent to market in 1962, were retarded by the 1962/63 drought in the provinces of Buenos

Aires and La Pampa. These steers were making a delayed appearance on Liniers market.

An additional factor was probably the uncertainty of the future and the fear that the demand for steers for the U.K. chilled beef trade would fall off even further because of the quota restrictions. The nature and peculiar intractability of the situation facing the Argentine beef producers at that time, can be seen when it is pointed out that local market quotation for steers represented a chilled beef equivalent of 375 dollars per ton. This compared with the actual price of Argentine chilled beef on Smithfield of approximately 500 dollars per ton.

In September 1963, beef quota arrangements were renegotiated with the United Kingdom. It was stated that the quantity for the period October 1963-March 1964 would vary between 80,000 and 89,000 tons of chilled beef. Supply would be varied within these limits in the light of market prospects. Towards the end of 1963 improved pasture conditions encouraged breeders in the south-west of Buenos Aires and in La Pampa to replace their practically non-existent herds. As a result of these factors the selling pressure began to ease. In addition, cow-beef marketings were seasonally low (see Figure 6).

This slackening off in marketings produced a price rise which slowly transformed the pessimism, that had been originally produced by news of the import restrictions

imposed by Great Britain, into optimism. This optimism reversed the previous situation and slaughtering were drastically reduced, pushing prices up sharply. By the end of 1963 there was a marked retention of breeding stock (see Figure 6), and cattle offered for sale were not sufficient to meet internal demand and export requirements.¹

The last stage of Argentina's return to constitutional government was achieved at the beginning of October 1963 with the inauguration of Dr Illia's Government. The economic policy of this new government has consisted (among other things) of massive salary increases. This increased the purchasing power of the internal market for meat so that it was able to compete successfully with sales for export, contributing to further price increases. As a result of these price increases, the Government issued several decrees in May 1964 with the aim of reducing prices.

The decrees provided for a commission to impose a tax on beef exports; they fixed retail prices for beef, instituted two meatless days per week and set penalties for the slaughter of animals weighing under 440 lbs, or cows in calf. The Government was given power to impose global quotas on exports of chilled and frozen beef, taking into account cattle numbers and domestic meat requirements.

¹ Review of the River Plate, July 10, 1964

As already seen in earlier sections, these measures, coupled with favourable grazing conditions, caused a decline in both exports and consumption in 1964,¹ although exports compared quite reasonably with those of 1962. It is not clear from this distance why producers allowed such a disinvestment in stocks in 1963, short of forced disinvestment through drought. Once the disinvestment had occurred, then a building-up period must inevitably follow. Local demand increased for the available supplies coming forward; and exporters, with a fixed exchange rate governing their realisations, could not compete on these terms. In turn, the through-puts of the big packers declined and the whole operation of such large plants was temporarily uneconomic.

At the beginning of 1965, the Government introduced a 100 per cent tax discount on steers weighing over 400 kg L.W., presumably to encourage higher market deliveries (R.P. 12.1.65). At the end of January the 3000 million pesos set aside in 1964 for pasture improvement loans (80% of cost, 12 per cent interest, repayment in 3½ years from 18 months after acceptance) had not been fully taken up. On April 19, the Argentine peso was devalued by 15 per cent to correct exchange problems and to stimulate exports of wheat and wool, as well as meat. Meat exports, however, were liable to pay a 9.5 per cent tax retention

¹ The Review of the River Plate (Feb. 9, 1965) puts consumption per head at 61 kg in 1964 compared with 98 kg in the best year of 1956.

to prevent excessive demand developing in the already depleted cattle markets.¹ The new quotation was 172 pesos to the dollar, compared with 151 pesos previously.

High internal prices and the seasonal shortage of supplies brought four new decrees on July 13. The first suspended the sale of beef to the retailer and the public, as also its transport, on Fridays and Saturdays.

(Mondays and Tuesdays were the previous beefless days.)

The second decree suspended the "slaughter of beef" for local consumption on Fridays and Saturdays. The third stipulated that steers of between 410 and 480 kg L.W. at Liniers, or their equivalent, when sold for slaughtering, can only be acquired by exporters. The fourth decree established a tax concession for the period July 13 - October 31, for growers selling export trade steers in the above weight range.² As local prices of steers had exceeded 60 pesos per kg L.W. and the packers could not afford to pay more than 50-58 pesos, some reduction of the payment price for export quality steers seemed inevitable, according to the Review of the River Plate. The tax exemptions were designed to compensate growers over this.

¹ Review of the River Plate, April 30, 1965

² Ibid, July 21, 1965

In a review of the economy on August 25, Dr Pugliese, Minister of the Economy, suggested, among other things, that consumption per head may have to be kept down to 62-65 kgs a year for some time. Other meat products were to be substituted for beef wherever possible.¹

The latest information to hand is that the National Meat Board terminated, on November 1, the decree of July 13 where steers of between 410 and 480 kg L.W. were reserved for the export trade. Sufficient supplies were apparently coming forward to keep market prices within the purchasing limitations of the packers.²

9. Projections

In this section we will review and discuss projections for Argentine beef and veal production, domestic consumption and exports. The first of these has been made by the Food and Agricultural Organization of the United Nations.³ F.A.O. assumptions and projections refer to the area: Argentina-Uruguay. We will assume the projections for this area can be applied to Argentina alone. These projections are based

¹ Review of the River Plate, August 31, 1965

² New Zealand Meat Producers' Board No.130, December 1965

³ Agricultural Commodities - Projections for 1970. F.A.O. Commodity Review, 1962, Special Supplement, pp.11-27.

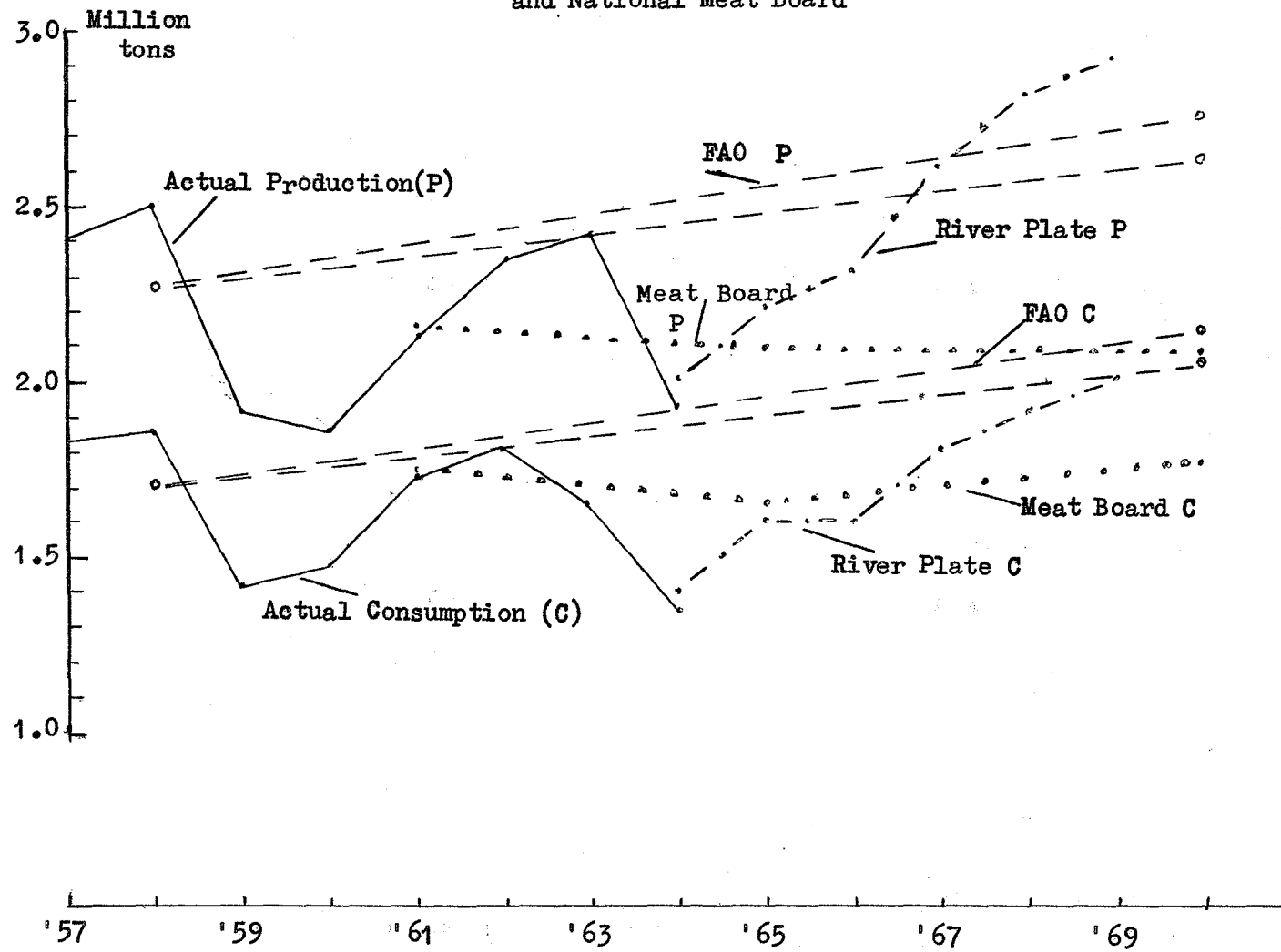
on the average of years 1957-59 and refer to 1970-71. They assume a population growth rate of 1.7 per cent per annum, a high and low level of G.N.P. growth of 3.7 and 3.0 per cent per annum respectively, and an income elasticity of demand for meat of 0.15. These assumptions give rise to two projected increases in production, consumption, and as a result, export surplus. Over the period 1957-59 to 1970-71, production of beef and veal is projected to increase by 16 per cent and 20 per cent according to the low and high assumptions respectively. Similarly, consumption is projected to increase over this period by 22 per cent and 25 per cent. These projections assume no increase in prices. The projections are graphed in Figure 7. Under the low assumption of G.N.P. growth, export surplus of beef and veal is projected to decline by a total of 5 per cent, while under the high assumption, it is projected to increase by a total of 3 per cent. On the basis of the assumption used in the F.A.O. projections, we might expect Argentine exports of carcass beef and veal in 1970-71 to show no real expansion (or decline) over the 1957-59 average of approximately 383,000 tons.

F.A.O. Projection Applied to Argentine Alone

	<u>1957-59 Average</u>			<u>1970-71 Projection</u>		
Production	2278.3	th.tons	High	2733	th.tons	
			Low	2642		
Consumption	1704.2	" "	High	2130	" "	
			Low	2079		
Exports "gross"	574.1	" "	High	591	" "	
			Low	545		
Exports(carcase)	383.3	" "	High	394	" "	
			Low	364		

FIGURE 7

Projections by F.A.O., Review of River Plate
and National Meat Board



Reference to Figures 4 and 7 shows the hazard of straight line projections when the basic underlying movement has been cyclic. The peak of the 1962-63 production cycle did not reach the projected F.A.O. production level for these years, thus extreme care must be exercised in further interpretation of these trends.

A more optimistic picture is presented by the Review of the River Plate.¹ They assume that present technical improvement objectives can be fulfilled and that a rational commercial policy is adopted. Production of clean beef could increase from 2.0 million tons in 1964 to 2.9 million tons in 1969 (see Figure 7), if the national herd can be built up to 53 million head in the same period. By allowing internal consumption to rise slowly from 65 kg per head in 1964 to 85 kg per head in 1969, total internal consumption would rise to 2.0 million tons in 1969, thus permitting an expansion of exports from 600,000 tons in 1964 to 900,000 tons in 1969. (Exports include livestock export equivalents in these calculations.)

Review of River Plate Projection 1964-1969

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
Cattle (million)	41	43	46	49	52	53
Clean beef (m.tons)	2.0	2.2	2.3	2.6	2.8	2.9
Export (m.tons)	0.6	0.6	0.7	0.8	0.9	0.9
Consumption (m.tons)	1.4	1.6	1.6	1.8	1.9	2.0

¹ October 31, 1964

The third projection has been made by the Argentine National Meat Board and the National Development Council.¹ This study was concerned with projecting the probable pattern of world import demand (as was the F.A.O. study) for beef. World import demand for beef was estimated at 1,432, 1,828, 2,101 thousand tons for 1965, 1970 and 1975 respectively. (This compares with the F.A.O. high income projection for world import demand of beef and veal of approximately 1,470 thousand tons for 1970-71.) On the basis of these projections for world import demand, demand for Argentine beef supplies were estimated at 523,820 and 950 thousand tons for the years 1965, 1970, and 1975 respectively.

The study continues by projecting total Argentine production of dressed beef, consumption and export surplus, for the years 1965, 1970 and 1975. These projections are shown for the years 1965 to 1970 in Figure 7. The assumptions on which these projections depend are: an annual population increase of 1.785 per cent per annum, an increase in net national income per head of 2 per cent per annum, and an increase in retail prices of 12 per cent between 1965 and 1970 and by 21 per cent between 1965 and 1975. The study also presupposes there will be no special incentives for the cattle-raiser, and that cattle stocks will vary solely in terms of the biological cycle and after a period of

¹ For details of this study see:
Review of the River Plate, July 1963, p.77.

fluctuation, would tend to stabilise at a total of approximately 42 million head. In computing the exportable beef surplus the trend of internal consumption is reckoned on the basis of an expanding demand pressing on a constant supply, which would force prices up and in turn tend to reduce per capita consumption.

Argentine Meat Board Projection

	Average <u>1952-60</u>	<u>1961</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Cattle (millions)	43.1	43.2	41.0	42.2	42.1
Slaughterings (millions)	9.86	10.14	9.83	9.69	9.68
Dressed Beef (th.tons)	2114	2155	2089	2059	2057
Export (th.tons)	455	394	433	300	150
Consumption (th.tons)	1549	1761	1656	1759	1907

The conclusion reached is that Argentina's annual exportable surplus of beef will decline and not satisfy estimated demand. These projections were followed by a second report, by the same body, on a five-year development programme for agriculture in the Argentine. It seems likely, that in order to gain support for this development programme, projections of Argentina's future beef production and export surpluses were made intentionally gloomy. At the same time, projections for world import demand may have been intentionally bright.

The crux of the matter, as well illustrated in these projections, is the probable change in the national beef herd. The level of yearly off-take cannot change very rapidly, nor can the present rate at which maturity is reached, without radical changes in feeding policy. The River Plate study above, indicates what can be achieved without exceeding a slaughter rate over about 24 per cent of the national herd in any one year. Clearly, disinvestment following droughts in the natural grazing areas, will occur again, and this could set up moderate cycles of restocking and reduced calvings as have already occurred three times since the war. There would seem to be an urgent necessity for the Argentine Government to investigate drought relief schemes which prevented or minimised these disinvestment cycles, as well as measures to improve pasture, to improve the level of offtake and to improve maturity rates.

The data, so far available, indicates that 1965 will have production and consumption totals similar to 1964, or slightly lower, following the January-September export figures. But, as already seen in earlier sections, there will be an increase in slaughter cattle coming forward in 1966 and 1967. If no further droughts occur, the production trend in Figure 7 could follow the River Plate projection two years later and could, on past experience, go on building up for three or four years (see Figure 8). Thus, in 1968 or 1969, production could possibly reach the lower of the

F.A.O. projection levels - but droughts could always intervene and turn the cycle downward again for a shorter or longer period. In the past, the peak of the cycle has been reached in the year following the drought, as surplus animals have had to be sold off. A sharp falling off of all slaughter then occurs.

On the consumption side, it also seems likely that 1965 levels will be no greater than 1964. For 1966, and up to 1969, we therefore predict that total consumption will rise roughly in line with the River Plate projection, but again at least two years later than they envisaged. These trends are plotted in Figure 8, and from the graph we estimate the build-up of production, consumption and gross export surplus as shown below. The recurrence of the next drought in the Argentine cannot be predicted, but the possibility of such should be borne in mind in interpreting these projections.

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
Production (th.tons)	1870	2000	2140	2330	2550
Exports (th.tons)	530	600	640	730	750
Consumption (th.tons)	1340	1400	1500	1600	1800

In short, there could be a rise in exportable surpluses of beef from the Argentine of some forty per cent over current export levels if present trends continue.

FIGURE 8

Projected Production and Consumption 1965-1969

